

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	14	(arrangement same composite same material\$1 same fiber\$1 same tension same (longitudinal or circumferential))	US-PGPUB; USPAT	OR	OFF	2009/11/02 21:54
S1	20	"0104452", "2005035940", "0107860"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 11:14
S2	9	"0107860"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 11:19
S3	122	"5960894", "6082450", "6520258", "5095999", "5544711", "5960894", "6082450", "6520258", "4724767", "5413048", "4669384", "5597974"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 11:25
S4	11	S3 AND COMPOSITE and polymer and fiber\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 11:27
S5	95	"5095999,5544711,5960894", "6082450", "6520258", "4724767", "5413048", "4669384", "5597974"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 15:00
S6	99	"5095999,5544711,5960894", "6082450", "6520258", "4724767", "5413048", "4669384", "5597974", "6422148"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 15:01
S7	0	S6 and (composite and meatl and inner and carrier and hydrocarbon)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 15:04
S8	0	S6 and (composite and meatl and inner and carrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 15:04

S9	25	S6 and (composite and metal and carrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 15:05
S10	22	S9 and ((perforat\$5) and (inner) and (hydrocarbon or water or steam))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 15:06
S11	21	S10 and hous\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 15:06
S12	16	S11 and debris	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 15:07
S13	0	"10574998"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 15:50
S14	0	"10574998"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 18:33
S15	0	"10574998.pn"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 18:33
S16	0	"10574998.pn"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 18:34
S17	13	"5906894"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/28 18:54
S18	12	"5906894"	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/28 18:55
S19	11	"5960894"	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/28 18:57

S20	956	(166/297).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/07/28 19:22
S21	0	S20 and (composite near contain\$3 near debris)	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/28 19:23
S22	1	S20 and (contain\$3 near debris)	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/28 19:24
S23	956	(166/297).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/07/29 09:32
S24	26	S23 and contain\$4 with debris	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/29 09:32
S25	71	S23 and ((remov\$4 or retriev\$4) with (debris))	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/29 09:36
S26	65	S25 and perforat\$4	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/29 09:37
S27	461837	"175"/	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/29 11:16
S28	41016	("175").CLAS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/07/29 11:16
S29	8	S28 and (perforat\$4 and composite and intact and debris)	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/29 11:17
S30	3	("5960894"   "6082450"   "6520258").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/29 11:29
S31	2	S30 and intact and composite	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/29 11:30
S32	4	"6422148"	US-PGPUB; USPAT; USOCR	OR	OFF	2008/07/29 11:57
S33	858	(166/297).CCLS.	US-PGPUB; USPAT	OR	OFF	2009/03/17 15:35
S34	28704	("175").CLAS.	US-PGPUB; USPAT	OR	OFF	2009/03/17 15:36
S35	1629	S34 and perforat\$3	USPAT	OR	ON	2009/03/17 15:37
S36	802	S35 and (metal or steel)	USPAT	OR	ON	2009/03/17 15:37
S37	1321	S34 and composite	USPAT	OR	ON	2009/03/17 15:38
S38	1041	S37 and (metal or steel)	USPAT	OR	ON	2009/03/17 15:38
S39	824	S38 and shape\$1	USPAT	OR	ON	2009/03/17 15:38
S40	0	(non near frangible near composite)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 20:01
S41	0	(non-frangible near composite)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 20:02

S42	0	(non near break\$3 near composite)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 20:03
S43	8	(perforator\$1 same composite near (material\$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 20:06
S44	5	(non-breakable near composit\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 20:13
S45	59365	("166").CLAS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/03/20 20:15
S46	0	S45 and (non-breakable near perforator)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 20:16
S47	877	S45 and perforator\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 20:16
S48	5	S47 and (Non near (brittle or frangible or break\$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 20:17
S49	7	S47 and (steel near carrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 21:04
S50	684	(166/55.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/03/20 23:52
S51	514	(175/4.6).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/03/20 23:53
S52	49	S51 and (perforating near gun near carrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/20 23:54

S53	514	(175/4.6).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/03/20 23:56
S54	3	(composite near material near non near frangible)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 21:48
S55	0	(composite near material near doesn't near (break or shatter))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 21:50
S56	62508	(polymer near matrix)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 21:51
S57	0	(polymer near matrix near non near frangible)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 21:52
S58	0	(non-frangible near polymer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 22:01
S59	0	(non near frangible near polymer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 22:02
S60	11	(non near break\$4 near polymer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 22:02
S61	0	(non near break\$4 near polymer near matri\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 22:03
S62	130	(composite near material near polymer near matrix)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 22:15

S63	5	((composite near material near polymer near matrix) same (frangi\$3 or break\$4 or shatter\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/03/25 22:19
S64	85846	(fiber\$1 same (longitudinal or circumferential))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/02 20:33
S65	7137	(composite same fiber\$1 same (longitudinal or circumferential))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/02 20:33
S66	526	(arrangement same composite same fiber \$1 same (longitudinal or circumferential))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/02 20:34
S67	227	(arrangement same composite same fiber \$1 same (longitudinal or circumferential))	US-PGPUB; USPAT	OR	OFF	2009/11/02 20:34
S68	132	(arrangement same composite same material\$1 same fiber\$1 same (longitudinal or circumferential))	US-PGPUB; USPAT	OR	OFF	2009/11/02 20:34

**EAST Search History (I nterference)**

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